

BC-700 & BC-720

Auto Hematology Analyzer with ESR

Key Specifications

Principles

WBC (IMG/Neu/Mon/Lym/Eos/Bas), NRBC/RET*,PLT-H/PLT-O*/IPF:
SF Cube ^ Cell Analysis Technology
^S: Scatter; F: Fluorescence; Cube: 3D analysis

RBC, PLT

Focusing Flow-DC Impedance Method

HGB

Colorimetric method

ESR

Photometric method

Number of measuring parameters (whole blood): 109

Number of reportable parameters: 41

WBC Bas# Bas% Neu# Neu% Eos# Eos% Lym# Lym% Mon#
Mon% IMG# IMG% RET#* RET#* RHE* IRF* LFR* MFR* HFR*
RBC HGB MCV MCH MCHC RDW-CV RDW-SD HCT NRBC#
NRBC% PLT PLT-I PLT-H PLT-O* MPV PDW PCT P-LCR P-LCC
IPF ESR

Number of research parameters: 68*

Number of measuring parameters (body fluid): 18

Number of reportable parameters: 7

WBC-BF TC-BF# MN# MN% PMN# PMN% RBC-BF

Number of research parameters: 11

Sample volume

CD (whole blood): 23ul CD+ESR

(whole blood): 160ul Predilute: 20ul

Data storage capacity

Up to 150,000 results including numeric and graphical information *

Throughput

CD 80t/h CDR 45t/h CD+ESR 40t/h

Analysis Mode

Sample Type	Analysis Mode
Whole blood	CBC, CBC + DIFF, CBC + DIFF + RET*, CD + ESR, CDR + ESR*, CD/WBC-3X, CDR/PLT-5X*, and other modes
Predilute	CBC, CBC + DIFF, CDR*, and other modes
Body fluid	CBC + DIFF

Physical Specifications

Dimensions

500D x 325W x 450H mm

Weight

≤35Kg

Voltage

100V-240V~ (±10%)

Frequency

50Hz/60Hz (±1Hz)

Power input

300VA

External output

LAN x 1, USB x 4 (Specifications: DC 5V; 500mA;

USB 2.0 x 3; USB 3.0 x 1)

Normal Operating Environment

Ambient temperature:

10°C ~ 35°C

Relative humidity:

30% ~ 85%

Atmospheric pressure:

70.0kPa ~ 106.0kPa^

^Note : Required altitude for normal operation:

-400m ~ +3000m

Performance

Parameter	Linearity Range	Precision	Carryover
WBC	0-500×10 ⁹ /L	≤2.5% (≥4.51×10 ⁹ /L)	≤ 1.0%
RBC	0-8.60×10 ¹² /L	≤1.5% (≥3.5×10 ¹² /L)	≤ 1.0%
HGB	0-260g/L	≤1.0% (110-180g/L)	≤ 1.0%
HCT	0-75%	≤1.5% (30%-50%)	≤ 1.0%
PLT*	0-5000×10 ⁹ /L	≤ 1.5(SD) (≤20×10 ⁹ /L)^ ≤ 2.5% (≥100×10 ⁹ /L)^	≤ 1.0%
RET*	0-0.8×10 ¹² /L	≤15% (RBC ≥ 3.00×10 ¹² /L RET%: 1.00% ~ 4.00%)	≤ 1.0%
ESR		≤1.8(SD)(0~20mm/h)	≤ 1.0%

^ Note: Applicable only to CDR/PLT-O 5x and CR/PLT-O 5x models

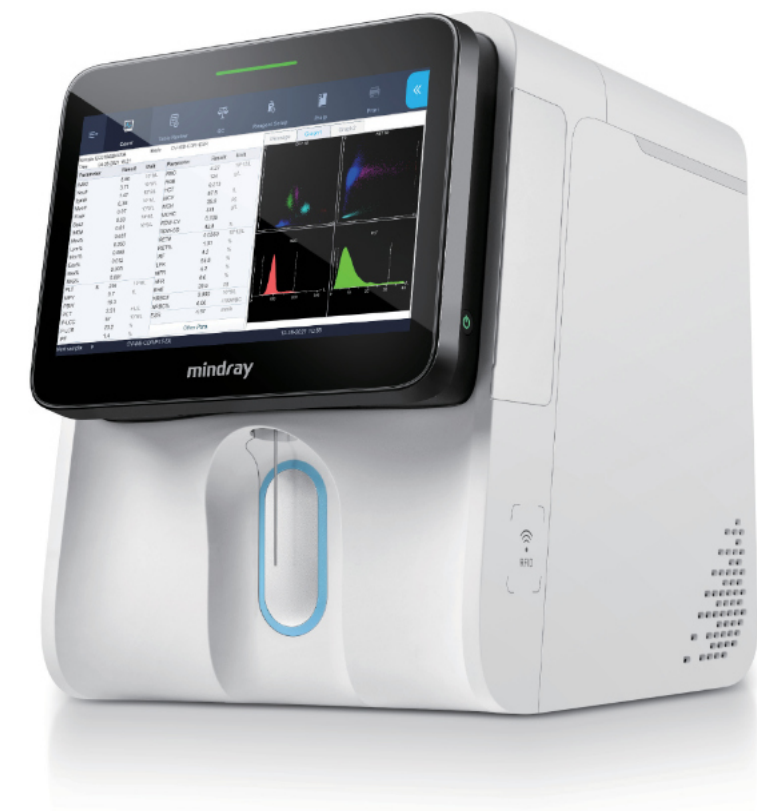
Items marked with an asterisk (*) apply only to BC-720

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BC-700 & BC-720

Auto Hematology Analyzer with ESR

Above and Beyond



www.mindray.com

P/N:ENG-BC-700 & BC-720 ESR-210285X6P-20220115
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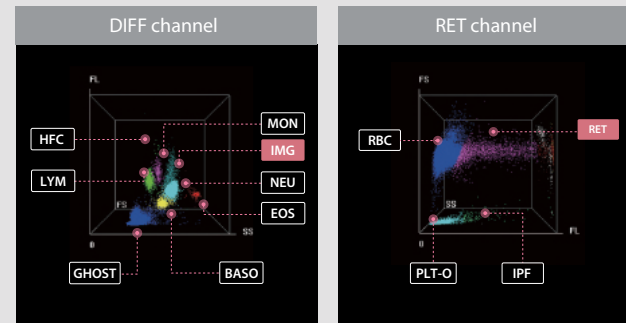
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healthcare within reach

••• Above your expectations

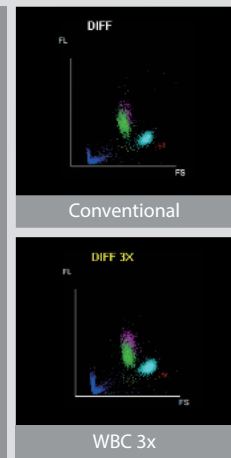
► SF Cube fluorescent technology allows reliable counting and differentiation of abnormal samples

— More refined and reliable cell differentiation

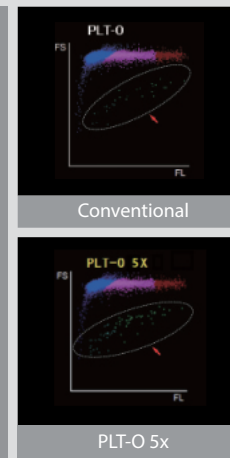
3D fluorescent analysis technology allows reliable differentiation of immature and other abnormal cells, such as immature granulocytes (IMGs), reticulocytes (RETs*), and immature platelet fraction (IPF).



WBC-Part Differentiation



PLT-O Measurement



— More reliable measurements for low-value samples

The BC-700 & BC-720 3D fluorescence analysis platform is designed with multiple counting WBC-3x and PLT-O 5x analysis modes to help ensure higher reliability for low-value WBC and PLT samples. In addition, the PLT de-aggregation function can reduce the cumbersome review work.

Parameter	Result	Unit	Parameter	Result	Unit
WBC	18.68	10 ⁹ /L	RBC	4.89	10 ¹² /L
Hem	15.90	g/L	HGB	136	g/L
Hct	33.2	%	HCT	0.342	
MCH	94.3	fL	MCV	72.4	fL
MCHC	0.81	g/dL	MCH	21.7	pg
RDW	0.02	%	MCHC	300	g/dL
RDW-CV	0.43	%	RDW-CV	0.286	%
RDW-SD	0.054	fL	RDW-SD	77.7	fL
RET#	0.019	%	RET#	0.004	%
RET%	0.026	%	RET%	0.01	%
IPF	0.008	%	IPF	10.8	%
LFR	0.001	%	LFR	88.4	%
MFR	0.026	%	MFR	8.0	%
HFR	84	%	HFR	2.6	%
RHE	10.9	%	RHE	25.5	%
NRBC%	14.6	%	NRBC%	0.050	%
NRBC	1.31	10 ⁹ /L	NRBC	0.00	10 ⁹ /L
ESR	38	mm/h	ESR	5.37	mm/h
IPF	45.3	%	IPF	5.7	%

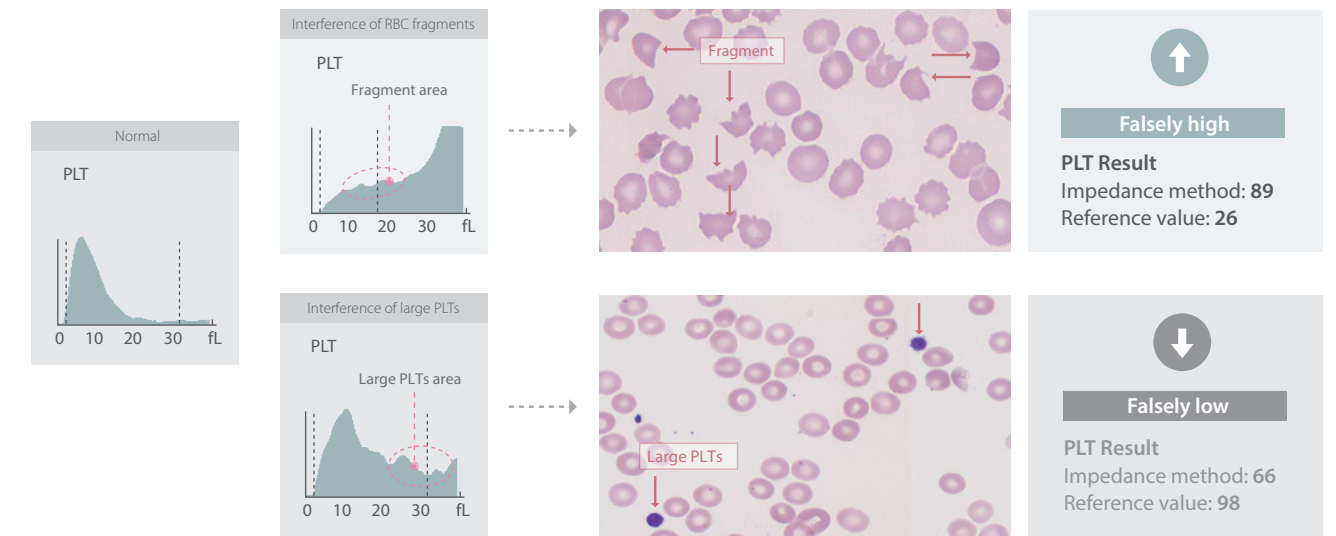
— More comprehensive alarm messages for abnormalities

The analyzer provides a detailed list of over 40 prompt messages, including WBC message, RBC message, and PLT message. This allows laboratory technicians to intuitively and quickly identify abnormal samples and proceed further with the samples in a timely manner. This in turn helps to avoid missed diagnosis of blood disease and false reports.

••• Beyond your expectations

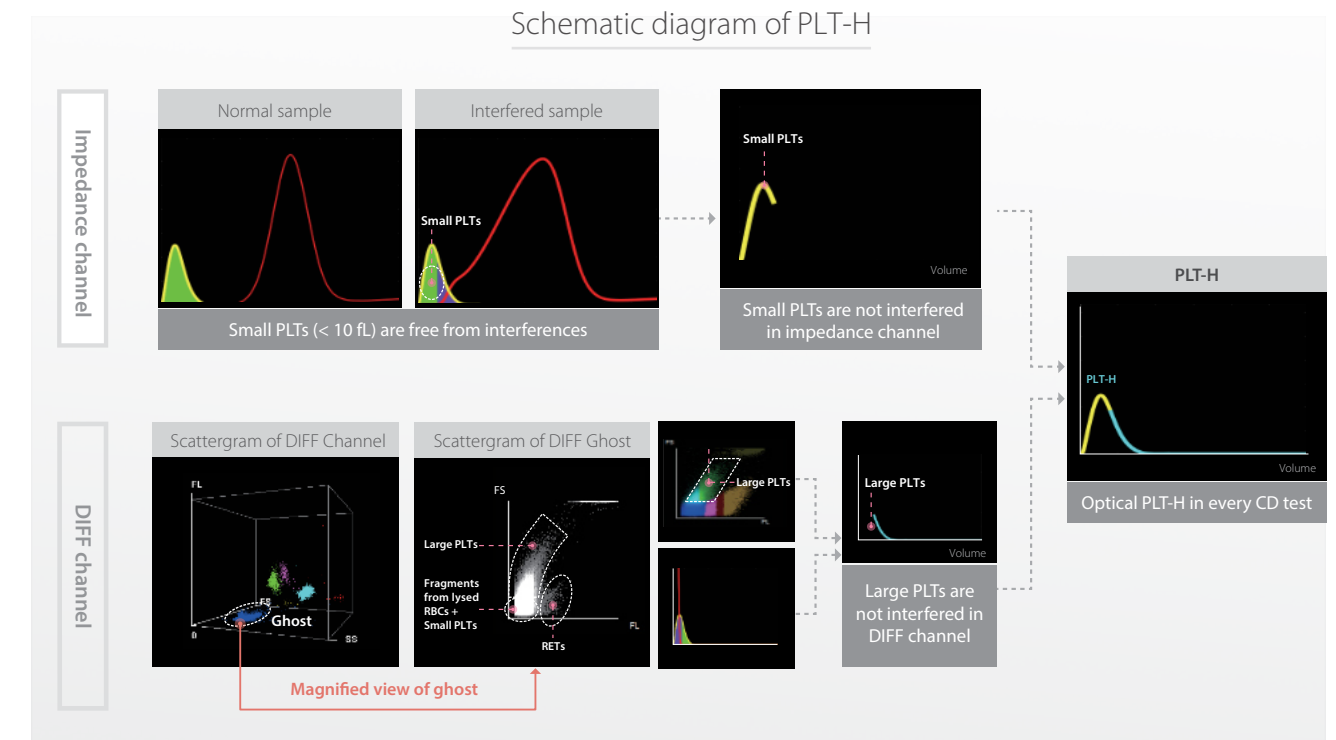
► Limitations of traditional PLT counting

In the traditional impedance method, PLTs are subject to interferences that may lead to falsely high or falsely low results (as shown in the figure). Once an error report is generated, it will directly affect the judgment and decision-making of clinicians. The results reported at the clinical decision level are related to patient safety. Therefore, accurate PLT results are critical in clinical practice.



Optical PLT-H in every CD test

In order to solve the above problem, we have developed a brand new parameter PLT-H. It combines small PLTs from the conventional impedance method and large PLTs from the optical method. The solution can resist the interferences in conventional PLT detection without requiring extra reagents.





CD + ESR in one test provide reliable ESR results with greater ease

The BC-700 series integrates an automatic ESR module in a hematology analyzer. It can also generate both CBC & ESR results in one test within 1.5 min. In addition, it saves the costs that would otherwise be incurred for the purchase, maintenance, consumables, and storage space of a separate ESR analyzer. Compared with the traditional Westergren method, this method performs better in quality traceability, repeatability, speed, safety, and level of automation.

Accurate

- Great correlation with the Westergren method
- Same QC and calibrator as in the BC-6000 series
- Combined examination helps to avoid the interferences of dehydration, polycythemia vera and anemia on ESR results;



Cost-effective

- The integrated instrument is capable of both CBC and ESR detection;
- Takes up the space of only one analyzer.



Automatic

- Report CBC + ESR results together within 1.5 min;
- The measurement results are protected against the influence of subjective factors;
- Automation can reduce the biosafety hazards that may otherwise be introduced by a manual method.



► Excellent performance, high reliability, and ease of use



labXpert

Coming as standard configuration
Same software as BC-6 series

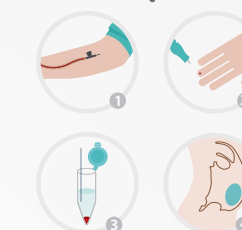
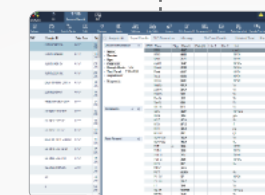


Applicable to different sample types

Peripheral blood/Capillary blood
Pre-diluted blood/Body fluid

RFID
Encryption key management

Floating screen
Switching between different analysis modes with a single touch



► An all-in-one solution that goes above and beyond your expectations

